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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,019	01/22/2002	Armen M. Boldi	020505-01-CFP	5463

28880 7590 10/16/2003

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EXAMINER

MCINTOSH III, TRAVISS C

ART UNIT PAPER NUMBER

1623

DATE MAILED: 10/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

File Copy

<b>Office Action Summary</b>	<b>Applicati n No.</b> 10/054,019	<b>Applicant(s)</b> BOLDI ET AL.	
	<b>Examiner</b> Traviss C McIntosh	<b>Art Unit</b> 1623	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The Amendment filed July 24, 2003 has been received, entered into the record, and carefully considered. The following information provided in the amendment affects the instant application by:

Claim 45 has been amended.

Remarks drawn to rejections of Office Action mailed May 20, 2003 include:

102(b) rejection: which has been maintained for reasons of record.

An action on the merits of claim 45 is contained herein below.

The text of those sections of Title 35, US Code which are not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 45 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the amendment filed by applicants on July 24, 2003, applicants have amended claim 45 to “carve out” the compound which was cited in the 102(b) rejection of the office action dated May, 20

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2003. Claim 45 is a Markush claim wherein one of the compounds of the Markush group is anticipated by Marsault et al., as set forth by the office action dated 5/30/03. Applicants do not have support for the entire Markush group minus one specific compound. The original disclosure does not provide any guidance for removing one specific member of the Markush group and leaving the remainder of the group. The changing of the scope of a claim, either by broadening or narrowing, can be construed as new matter as either is capable of changing the scope of what is claimed, and the narrower or broader group must be supported in its entirety by the specification as originally filed. As set forth supra, the original disclosure does not have support for the entire Markush group minus one specific compound. Applicant is required to cancel the portion of the claims which excludes the specific compound. It is noted that a rejection of the claims is reviewable by the Board of Patent Appeals and Interferences.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

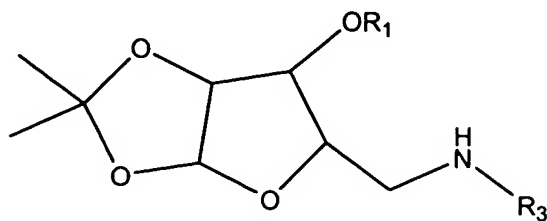
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The rejection of claim 45 under 35 U.S.C. 102(b) as being anticipated by Marsault et al. (“Oxazaphosphorinane Precursors to the Diastereoselective Synthesis of DNA Phosphorothioates”, Tetrahedron, Vol. 53, No. 50, pp. 16945-16958, 1997) is maintained for reasons of record.

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Claim 45 is drawn to a compound represented by the structure:

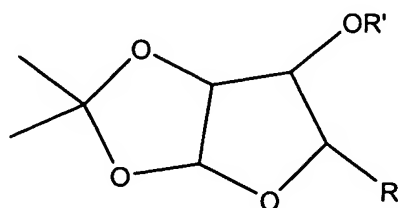


wherein R<sub>1</sub> and R<sub>3</sub> are defined as in claim 1.

Marsault et al. disclose a compound on page 16949, top section, identified by 17 wherein R=benzene and R'=H, which anticipates the compound of claim 45 of the instant application wherein R<sup>1</sup> is -(CH<sub>2</sub>)<sub>0</sub>-aryl (wherein aryl is benzene) and R<sup>3</sup> is C<sub>3</sub> alkyl as the specification defines alkyl as branched and the isopropyl group of Marsault et al. is a branched C<sub>3</sub> alkyl. The compound of Marsault et al. thus clearly anticipates the compound as claimed in the instant applications claim 45. As set forth supra, applicant does not have support for the entire group minus the one specific member as claimed.

Claim 45 is rejected under 35 U.S.C. 102(b) as being anticipated by Tronchet et al. ("Synthesis of Different Types of Amino Sugars Using Reductive Amination Reactions", Helvetica Chimica Acta, 1977, 60(6), pp. 1932-1934), newly cited.

Tronchet et al. disclose compounds represented by the chemical formula:



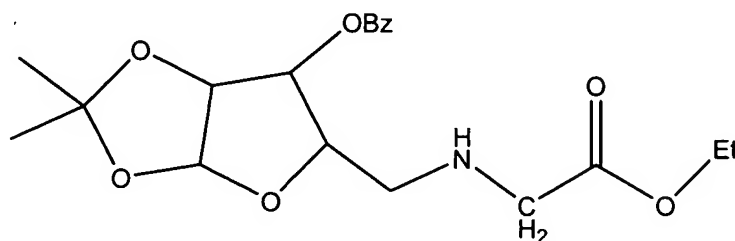
on page 1933. Tronchet et al. disclose formula 9 wherein R=CH<sub>2</sub>NHMe, and R'=Me; formula 10 wherein R=CH<sub>2</sub>NHEt and R'=Me; and, formula 11 wherein R=CH<sub>2</sub>NHPh, and R'=Me. All of

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these compounds fall in the Markush group of applicants claim, as  $R_1$  of applicant's structure is defined as optionally being  $C_{1-14}$  alkyl (methyl), and  $R_3$  is defined as  $C_{1-14}$  alkyl (methyl or ethyl) or  $(CH_2)_{0-2}$  cycloalkyl, wherein the specification defines cycloalkyl as a saturated or partially **unsaturated** 3-7 membered monocyclic ring (phenyl is a partially unsaturated 6 membered monocyclic ring). The compounds of Tronchet et al. are seen to anticipate the compound of the instant application.

Claim 45 is rejected under 35 U.S.C. 102(b) as being anticipated by Paulsen et al. (Branched and Chain-extended Sugars, XXVIII; Synthesis of 6-amino-6-deoxyhepturonic Acids", Liebigs Annalen der Chemie, 1985, vol. 1, pp. 113-128), newly cited.

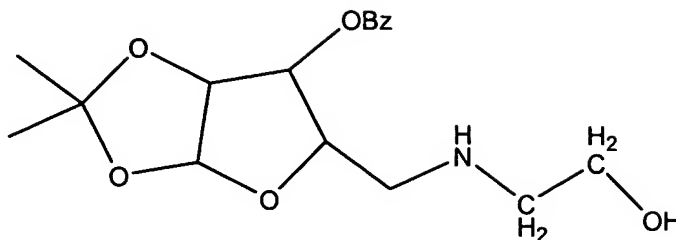
Paulsen et al. disclose a compound represented by the chemical formula:



(compound 12, page 114) which anticipates applicants compound, as applicant defines  $R_1$  as optionally being  $(CH_2)_{0-2}$ -aryl, and  $R_3$  as  $C_{1-14}$  alkyl, wherein the specification teaches as a definition of alkyl, applicants include substituted alkyl, and  $C(O)-O-C_{1-8}$  alkyl is included as a substituent.

Paulsen additionally disclose a compound represented by the structure:

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(compound 13, page 114) which anticipates applicants compound, as applicant defines  $R_1$  as optionally being  $(CH_2)_{0-2}$ -aryl, and  $R_3$  as  $C_{1-14}$  alkyl, wherein the specification teaches as a definition of alkyl, applicants include substituted alkyl, and OH is included as a substituent.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Marsault et al. ("Oxazaphosphorinane Precursors to the Diastereoselective Synthesis of DNA Phosphorothioates", *Tetrahedron*, Vol. 53, No. 50, pp. 16945-16958, 1997), Tronchet et al.

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("Synthesis of Different Types of Amino Sugars Using Reductive Amination Reactions", Helvetica Chimica Acta, 1977, 60(6), pp. 1932-1934), Paulsen et al. (Branched and Chain-extended Sugars, XXVIII; Synthesis of 6-amino-6-deoxyhepturonic Acids", Liebigs Annalen der Chemie, 1985, vol. 1, pp. 113-128), and Akhtar et al. (US Patent 5,432,163).

Claim 45 is drawn to the compound as set forth supra.

Marsault et al., Tronchet et al., and Paulsen et al. disclose the compounds as set forth supra, what is not taught is the other various moieties included on the R<sub>1</sub> and R<sub>3</sub> position as set forth in the instant application.

Akhtar is cited to show various other compounds which are correlative to the compounds of the instant application wherein there is a 1,2-O-isopropylidene moiety included and additionally wherein there are various alkyl moieties on the 3 position of the sugar and various amino substituted moieties on the 5 position (column 5, lines 22-58).

Obviousness based on similarity of structure and function entails motivation to make claimed compound in expectation that compounds similar in structure will have similar properties. Where prior art compounds essentially bracket the claimed compounds, and are well known pesticides, for example, one of ordinary skill in the art would be motivated to make the claimed compounds in searching for new pesticides. See *In re Payne*, 606 F. 2d 303, 203 USPQ 245, 254-55 (CCPA 1979). Applicant's compounds comprise the same core structure as the prior arts compounds, and one of ordinary skill in the art would expect that compounds which bracket the claimed compounds would have properties similar to those of the prior art.



*Conclusion*

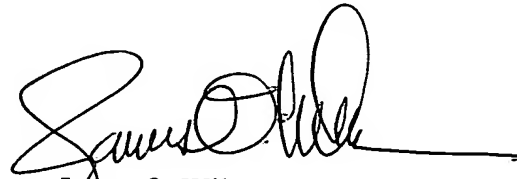
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Traviss C McIntosh whose telephone number is 703-308-9479.

The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson can be reached on 703-308-4624. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

Traviss C. McIntosh III  
October 14, 2003



James O. Wilson  
Art Unit 1623  
Supervisory Patent Examiner